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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,119	02/11/2002	Richard I. McCartney	5167-A-16	7723

7590 07/27/2004
CAHILL, SUTTON & THOMAS P.L.C.
Attn: Marvin A. Glazer
155 Park One
2141 East Highland Avenue
Phoenix, AZ 85016

EXAMINER

LIU, MING HUN

ART UNIT	PAPER NUMBER
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2675

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DATE MAILED: 07/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/074,119

Applicant(s)

MCCARTNEY, RICHARD I.

Examiner

Ming-Hun Liu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-39 is/are allowed.
- 6) ☒ Claim(s) 1-11 and 40 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear as to which predetermined duration the applicant is referring to, either the first, second or an entirely new duration.
2. Claims 4-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear as to which display line signal, either the row display line or column display line, the applicant's "display line timing signal" is referring to.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-3 are rejected under 35 U.S.C. 102(e) as being unpatentable by US Patent 6,628,273 to Rindal et al.

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In reference to claim 1, it can be seen in figures 2 and 3 that Rindal discloses a method of operating a matrix LCD display with a row and column driver (figure 2, items 210r and 210c respectively). It is apparent from figure 2 that the columns of the LCD display includes a first column closest to row driver and a second column further away. The row enable signal (figure 3, item 295) is subject to a propagation delay in the direction moving away from the driving circuit (210r).

Rindal also teaches that the row enable propagation (denoted by item 295) must be matched with the driving signals (figure 4, items 211, 212 and 213) where the driving signals experience delays at predetermined times that correspond with the propagation delays of the enable signal (column 5, lines 41-52).

In reference to the new amended portion of claim 1, it is shown from column 3, lines 13-15 that the pulse width duration is a predetermined duration. Furthermore, by referring to figure 9 of Rindal, it can be seen that the scanning (X) pulses are longer and the column pulses happen within the longer scan pulses.

In reference to claim 2, it can be seen from figures 2 and 3 that Rindal discloses a method of operating a matrix LCD display with a row and column driver where the driving method is essentially the same as the method described in the rejection of claim 1 with the exception of switching the roles of column and row components, namely switching column propagation delay 290 for delay 295.

As to claim 3, the claim is rejected on the grounds outlined in the rejection of claim 2.

Claim 40 is rejected on grounds outlined in the rejection of claims 1

Allowable Subject Matter

5. Claims 12-39 are allowed. Due to the high speed in which signal propagates in the active matrix display, very few inventions have been introduced to address the possible propagation delay problems in the display. The references that do address propagation delays usually deal with register propagation and propagation problems in passive matrix displays with single row/column drivers. For these reasons, the claimed invention is deemed patentable.

Response to Arguments

6. Applicant's arguments filed 5/24/04 for claim 1 have been fully considered but they are not persuasive. I reference to the applicant's arguments concerning the rejection of claim 1, the examiner understands the distinction that the applicant is trying to make. The examiner agrees with the applicant's discussion about the difference in the addressing and driving between the applicant's and Rindal's inventions, however such distinctions are not clearly reflected in the claim language. The applicant's claim, in its current form is still anticipated by the Rindal reference. As far as the limitation "including a row driver for each row of the array" such a statement is unclear as to if each row has an independent row driver or each row is lead to a row driver circuit. The same argument is applied for the column drivers.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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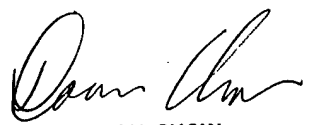
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ming-Hun Liu whose telephone number is 703-305-8488. The examiner can normally be reached on Mon-Fri.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ming-Hun Liu


DENNIS-DOON CHOW
PRIMARY EXAMINER